

What is claimed is:

1. A rotary engine, comprising:
 - a stator having an annular chamber therein;
 - a first piston that is disposed within said annular chamber, wherein said first piston traverses said chamber;
 - a second piston that is disposed within said annular chamber, wherein said second piston traverses said annular chamber;
 - at least one dog that is positioned within said annular chamber and which selectively limits the directional travel of said first piston and said second piston;
 - at least one fuel inlet to said annular chamber; and
 - at least one exhaust outlet from said annular chamber.

2. A rotary engine as described in claim 1, wherein said first piston comprises a body and a protrusion extending from a side of said body of said first piston, and wherein said second piston comprises a body and a protrusion extending from a side of said body of said second piston, and wherein a subchamber is formed when said first piston and said second piston substantially abut each other, and wherein one end of said subchamber is closed by said body of said first piston and an opposite end of said subchamber is closed by said body of said second piston, and the remainder of said sub chamber is closed by walls of said annular chamber.

3. A rotary engine as described in claim 1 comprising a first dog and a second dog, wherein said first dog selectively limits travel of one of said first piston and said second piston in one direction, while said second dog selectively limits travel of a remaining one of said first piston and said second piston in an opposite direction.

4. A rotary engine as described in claim 2 comprising a first dog and a second dog, wherein said first dog selectively limits travel of one of said first piston and said second piston in one direction, while said second dog selectively limits travel of a remaining one of said first piston and said second piston in an opposite direction.

5. A rotary engine as described in claim 1, wherein said annular chamber is generally circular.

6. A rotary engine as described in claim 1, wherein said annular chamber has a generally circular cross section.

7. A rotary engine as described in claim 4, wherein said sub chamber is present between said first piston and said second piston when travel of said first piston and said second piston are stopped by said first dog and said second dog.

8. A rotary engine as described in claim 7, wherein an igniter communicates with said chamber and said sub chamber.

9. A rotary engine as described in claim 3, wherein when said first dog limits and stops the travel of one of said first piston and said second piston in one direction, the travel of a remaining of said first piston and said second piston forces said one of said first piston and said second piston forward, wherein movement of said one of said first piston and said second piston is stopped by said second dog.

10. A rotary engine as described in claim 9, wherein the travel of said remaining of said first piston and said second piston is stopped by said first dog after said remaining of said first piston and said second piston is forced forward.

11. A rotary engine as described in claim 9, wherein fuel is received between said first piston and said second piston while one of said first piston and said second piston is stopped and said remaining of said first piston and said second piston travels.